

REMARKS

Claims 24, 27, 30-33, 35-37, 43, and 47-52 were rejected as anticipated by Leinwand. Claims 28, 29, and 38 were rejected as obvious over Leinwand in view of Rochberger. Claim 34 was rejected as obvious over Leinwand in view of Zhang. Claims 39-42 were rejected as obvious over Leinwand in view of Knauerhase in view of Fung. Claim 44 was rejected as obvious over Leinwand in view of Knauerhase. Claims 45 and 46 were rejected as obvious over Leinwand in view of Rochberger in view of Knauerhase. Claims 53-55 were rejected as obvious over Leinwand in view of Ansell. Claim 56 was rejected as obvious over Leinwand, Knauerhase, Fung, and Ansell.

Claims 1-56 have been canceled. Claims 57-88 have been added by amendment. No new matter has been added. In view of the amendments and the Remarks, the Applicant respectfully requests allowance of the pending claims.

Rejections under 35 U.S.C. §102(e)

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art reference disclose each element of the claim. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983). For a process, anticipation requires identity of the claimed process and a process of the prior art. The claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 45 F.3d 1550 (Fed. Cir. 1995). Those elements must either be inherent or disclosed expressly. *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560 (Fed. Cir. 1988). Those elements must also be arranged as in the claim. See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989). For anticipation, there must be no difference between the claimed invention and the reference disclosure as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991).

Rejections under 35 U.S.C. § 103(a)

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference(s) or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991); M.P.E.P. § 2143.

The Supreme Court recently reaffirmed use of the *Graham* factors for determining obviousness under 35 U.S.C. § 103(a). *KSR Int'l Co. v. Teleflex, Inc. (KSR)*, No 04-1350 (U.S. Apr. 30, 2007). The four factual inquiries under *Graham* require examination of: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims in issue; (3) the level of ordinary skill in the pertinent art; and (4) the objective evidence of secondary consideration. *Graham v. John Deere (Graham)*, 383 U.S. 1, 17-18, 149 USPQ 459, 467 (1966); 35 U.S.C. § 103.

In *KSR*, the Supreme Court recognized that the requirement for a teaching, suggestion, or motivation to modify or combine the references and arrive at the claimed invention provides a helpful insight for determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a). *KSR* at 14, 15. In addition, the Court maintained that any analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and that it is “important to identify reasons that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed, because “inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *Id.*

Independent Claim 57

Claim 57 has been added by amendment, and generally recites the subject matter of canceled claims 33 and 50. The Applicant respectfully asserts that claim 57 is allowable for at least the reason that the cited references do not teach or disclose analyzing a first interconnection between one or more routing devices in the first route by approximating the behavior at the one or more routing devices in the first route; analyzing a second interconnection between one or more routing devices in the second route by approximating the behavior at the one or more routing devices in the second route; and selecting a route from one of the first route or the second

route using the geographic location of the destination, the geographic location of the router, the geographic location of the first intermediate routing device, the geographic location of the second intermediate routing device, the approximated behavior at the one or more routing devices in the first route, and the approximated behavior at the one or more routing devices in the second route, as recited in claim 57.

For example, to support a rejection of claim 50, now canceled, the Office Action stated that:

Regarding claim 50, Leinwand teaches the method of claim 49, wherein modeling comprises approximating the behavior at routing devices in the network (col. 7, lines 5-23, Leinwand discloses autonomous systems receiving reachability information in order to determine routes).

Leinwand at Col. 7, lines 5-25 discloses:

When the source 11 transmits a message, such as a data packet, to the destination 34, the router 14 in the AS 12 makes a decision as to which route to take. In particular, the router 14 determines which of the ASs 20, 22, or 28 the data packet will travel to next. As a result, the router 14 decides the link 15, 16, or 17 on which to send the data packet. The router 14 uses reachability information in order to determine the route. The AS 12 receives reachability information via BGP4 about the AS 32 from the AS 20, the AS 22, and the AS 28. Based on this information, the router 14 in the AS 12 make a decision as to which of the ASs 20, 22, and 28 directly linked to the AS 12 the data packet should travel to. This decision is called choosing the "next hop" because a data packet is typically referred to as "hopping" from one router to another. After the next hop is selected, the data packet travels to the next AS 20, 22, or 28. The data packet then travels through routers (not shown) in the next AS 20, 22, or 28. One such router, at a border of the next AS 20, 22, or 28 determines the subsequent AS which the data packet will hop to next. Thus, these routers (not shown) will select one of the links 21, 24, and 29. (Emphasis added)

The Applicant agrees that the above-cited language discloses a router receiving "reachability information" in order to determine a route. However, the Applicant disagrees that reachability information, as disclosed by Leinwand, discloses approximating the behavior at a routing device as recited in claim 57.

As understood by one of skill in the art, reachability information describes, quite literally, what networks can be reached. Leinwand's use of the term "reachability information" comports with the general meaning given to that term by one of skill in the art. For example, Leinwand at Col. 5, line 56 to Col. 6, line 10 discloses:

Using the reachability information transmitted via BGP4 by each AS 12, 20, 22, 26, 28, and 32 and the addressing information in data packets, the ASs 12, 20, 22, 26, 28 and 32 can communicate and transfer data packets between the source 11 and the destination 34. Each AS 12, 20, 22, 26, 28, and 32 transmits the reachability information describing the range of its assigned IP addresses. The other ASs 20, 22, 26, and 28 receive and relay this reachability information. For examples both the AS 12 and the AS 32 will transmit BGP messages describing the range of IP addresses which are assigned to the AS 12 and the AS 32, respectively. The AS 12 and the AS 32 thus broadcast their reachability information. The AS 26 receives the reachability information for the AS 32 and relays the information to the AS 20. The AS 20 receives the reachability information for the AS 32 from the AS 26. The AS 20 informs the AS 12 that the AS 32 and, therefore, the IP addresses assigned to the AS 32 are reachable via the AS 20. Similarly, the AS 20 receives the reachability information from the AS 12 and relays the information to the AS 26. The AS 26 receives the reachability information for the AS 12 and informs the AS 32 that the AS 12 and, therefore, the IP addresses assigned to the AS 12, are reachable via the AS 26. (Emphasis added)

As seen above, the reachability information of Leinwand describes the range of IP addresses assigned to an AS; in other words, the reachability information describes what IP addresses can be reached. Describing what networks can be reached, however, clearly does not teach or disclose approximating the behavior at a routing device. Accordingly, the Applicant respectfully asserts that claim 57 is allowable for the reasons given above.

Dependent Claims 58-67

Claims 58-67 have been added by amendment, and generally correspond to canceled claims 35-38, 43-46, and 52-53. No new matter has been added.

Claim 58 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein the network traffic comprises a request and the destination comprises a server.

Claim 59 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein the selecting step further comprises selecting a route with a shortest distance to the destination.

Claim 60 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein the selecting step further comprises selecting a route having the shortest latency time.

Claim 61 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein the selecting step further comprises selecting a route having the most available bandwidth.

Claim 62 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein determining a destination comprises selecting a destination based on its load.

Claim 63 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein determining a destination comprises selecting a destination based on a connection speed associated with a source of the network traffic.

Claim 64 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein determining a destination comprises selecting a destination based on bandwidth available at the destination.

Claim 65 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein determining a destination comprises selecting a destination based on a connection speed associated with a source of the network traffic and the bandwidth available at the destination.

Claim 66 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, wherein the network comprises the Internet and the network traffic comprises packets.

Claim 67 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 57, further comprising assigning a first confidence level to the determined geographic location of first intermediate routing device and assigning a second confidence level to the determined geographic location of the second intermediate routing device, and wherein selecting a route comprises selecting a route from one of the first route or the second route using the geographic location of the destination, the geographic location of the

router, the geographic location of the first intermediate routing device, the geographic location of the second intermediate routing device, the approximated behavior at the one or more routing devices in the first route, the first confidence level assigned to the determined geographic location of the first intermediate routing device, the approximated behavior at the one or more routing devices in the second route, and the second confidence level assigned to the determined geographic location of the second intermediate routing device.

Claims 58-67 are also allowable for at least the reason that each depends from an allowable independent claim.

Independent Claim 68

Claim 68 has been added by amendment, and generally recites the subject matter of canceled claims 33 and 51. The Applicant respectfully asserts that claim 68 is allowable for at least the reason that the cited references do not teach or disclose analyzing a first interconnection between one or more routing devices in the first route to simplify the first route by combining one or more routing devices in the first route; analyzing a second interconnection between one or more routing devices in the second route to simplify the second route by combining one or more routing devices in the second route; and selecting a route from one of the first route or the second route using the geographic location of the destination, the geographic location of the router, the geographic location of the first intermediate routing device, the geographic location of the second intermediate routing device, the combined one or more routing devices in the first route, and the combined one or more routing devices in the second route, as recited in claim 68.

For example, to support a rejection of claim 51, now canceled, the Office Action states that:

Regarding claim 51, Leinwand teaches the method of claim 49, wherein modeling comprises simplifying the map of the network by combining routing devices in traffic routes (col. 1, lines 39-50, Leinwand discloses calls routed to a geographic region; col. 2, lines 21-32, Leinwand discloses router acting as a node for data to access multiple routes).

The Applicant disagrees with the reasoning above. Assuming, arguendo, that Leinwand discloses “calls routed to a geographic region” and a router “acting as a node for data to access multiple routes”, claim 68 would still allowable over Leinwand. First, “calls routed to a

geographic region” does not disclose simplifying a route by combining one or more routing devices in the route. The Applicant would like to emphasize that there clearly is no equivalence between “calls routed to a geographic region” and simplifying a route by combining one or more routing devices in the route as recited in claim 68.

Second, a router “acting as a node for data to access multiple routes” does not disclose simplifying a route by combining one or more routing devices in the route. The Applicant would like to emphasize that there clearly is no equivalence between “acting as a node for data to access multiple routes” and simplifying a route by combining one or more routing devices in the route as recited in claim 68. Accordingly, the Applicant respectfully asserts that claim 68 is allowable over the cited references.

Dependent Claims 69-78

Claims 69-78 have been added by amendment, and generally correspond to canceled claims 35-38, 43-46, 52, and 53. No new matter has been added.

Claim 69 is allowable for at least the reason that the cited references do not disclose the method of claim 68, wherein the network traffic comprises a request and the destination comprises a server.

Claim 70 is allowable for at least the reason that the cited references do not disclose the method of claim 68, wherein the selecting step further comprises selecting a route with a shortest distance to the destination.

Claim 71 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein the selecting step further comprises selecting a route having the shortest latency time.

Claim 72 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein the selecting step further comprises selecting a route having the most available bandwidth.

Claim 73 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein determining a destination comprises selecting a destination based on its load.

Claim 74 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein determining a destination comprises selecting a destination based on a connection speed associated with a source of the network traffic.

Claim 75 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein determining a destination comprises selecting a destination based on bandwidth available at the destination.

Claim 76 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein determining a destination comprises selecting a destination based on a connection speed associated with a source of the network traffic and the bandwidth available at the destination.

Claim 77 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, wherein the network comprises the Internet and the network traffic comprises packets.

Claim 78 is allowable for at least the reason that the cited references do not teach or disclose the method of claim 68, further comprising assigning a first confidence level to the determined geographic location of first intermediate routing device and assigning a second confidence level to the determined geographic location of the second intermediate routing device, and wherein selecting a route comprises selecting a route from one of the first route or the second route using the geographic location of the destination, the geographic location of the router, the geographic location of the first intermediate routing device, the first confidence level assigned to the determined geographic location of the first intermediate routing device, the combined one or more routing devices in the first route, the geographic location of the second intermediate routing device, the second confidence level assigned to the determined geographic location of the second intermediate routing device, and the combined one or more routing devices in the second route.

Claims 69-78 are also allowable for at least the reason that each depends from an allowable independent claim.

Independent Claim 79

Claim 79 has been added by amendment, and generally recites the subject matter of canceled claims 33 and 39. The Applicant respectfully asserts that claim 79 is allowable for at

least the reason that the cited references do not teach or disclose selecting a destination for the network traffic received at the router because the destination has content associated with a geographic location of a source of the network traffic, as recited in claim 79.

For example, to support a rejection of claim 39, now canceled, the Office Action states:

Leinwand and Knauerhase fail to teach the limitation further including selecting a destination because it has content associated with the geographic location, wherein the content is one of advertising content is one of advertising content associated with the geographic location, promotional content associated with the geographic location, or content in a language associated with the geographic location.

However, Fung teaches a method and apparatus for automatically providing a called party with audio prompts in a language or dialect that has been selected by the calling party for the calling party or is generally spoken in the called party's geographic location (see abstract). Fung teaches the selection of a language from a plurality of language selections in response to the determined geographic location of the called party (col. 2, line 30 – col. 3, line 43).

The Office Action asserts that the cited language from Fung discloses selecting a language in response to the determined geographic location of a called party. However, even assuming that the above-characterization of Fung is true, claim 79 is allowable over Fung.

Claim 79 recites selecting a destination for network traffic received at the router because the destination has content associated with a geographic location of a source of the network traffic. The cited language from Fung has nothing whatsoever to do with selecting a destination for network traffic received at a router. First, “automatically providing a called party with audio prompts in a language or dialect that has been selected by the calling party for the calling party or is generally spoken in the called party's geographic location” plainly has nothing to do with selecting a destination for network traffic received at the router because the destination has content associated with a geographic location of a source of the network traffic. Second, selecting “a language from a plurality of language selections in response to the determined geographic location of the called party” plainly has nothing to do with selecting a destination for network traffic received at the router because the destination has content associated with a geographic location of a source of the network traffic.

When Fung is properly considered as a whole, it is clear that Fung does not support a rejection of claim 79. As seen in Figure 1 of Fung, a caller specifies a destination (a phone) by dialing a particular phone number. It would make no sense to select a destination in Fung other than the originally dialed number, because doing so would send the call to a phone that the caller did not dial.

Thus, the Applicant respectfully asserts that claim 79 is allowable for at least the reason that the cited references do not teach or disclose selecting a destination for the network traffic received at the router because the destination has content associated with a geographic location of a source of the network traffic, as recited in claim 79.

To support a rejection of claim 39, now canceled, the Office Action also states:

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Leinwand and Knauerhase in view of Fung to choose content based on a language associated with a geographic location. One would be motivated to do so because it will allow for the content to be in that location's native language. (Emphasis added)

The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984). Further, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959).

The Applicant respectfully asserts that Fung cannot be combined with the other cited references to arrive at the invention of claim 79. First, claim 79 has nothing to do with choosing content. Rather, claim 79 recites selecting a destination for network traffic received at the router because the destination has content associated with a geographic location of a source of the network traffic.

Second, as discussed above, the proposed combination with Fung would fundamentally change the principle of operation of Fung, and render Fung unsatisfactory for its intended purpose, because selecting a destination other than the one dialed by the caller would cause the

wrong party to receive the call. Accordingly, Fung cannot be used to support a rejection of claim 79.

In view of the discussion above, the Applicant respectfully asserts that claim 79 is allowable for at least the reasons that: 1) the cited references do not disclose every element of claim 79; 2) by extension, there can be no combination that arrives at the invention of claim 79; 3) Fung cannot be used to support a rejection of claim 79 because the proposed combination with Fung would clearly change the principle of operation of Fung; and 4) Fung cannot be used to support a rejection of claim 79 because the proposed combination with Fung would clearly render the invention of Fung unsatisfactory for its intended purpose.

Dependent Claims 80-88

Claims 80-88 have been added by amendment, and generally correspond to canceled claims 35, 36, 40-42, 44-46, 52, and 53. No new matter has been added.

Claim 80 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the network traffic comprises a request and the destination comprises a server.

Claim 81 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the selecting a route step further comprises selecting a route with a shortest distance to the destination.

Claim 82 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the selecting a destination step further comprises selecting a destination based on a connection speed associated with a source of the network traffic.

Claim 83 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the selecting a destination step further comprises selecting a destination based on bandwidth available at the destination.

Claim 84 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the selecting a destination step further comprises selecting a destination based on a connection speed associated with a source of the network traffic and the bandwidth available at the destination.

Claim 85 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the network comprises the Internet and the network traffic comprises packets.

Claim 86 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the content is one of advertising or promotional content.

Claim 87 is allowable for at least the reason that the cited references do not disclose the method of claim 79, wherein the content is in a language associated with the geographic location of the source.

Claim 88 is allowable for at least the reason that the cited references do not disclose the method of claim 79, further comprising assigning a first confidence level to the determined geographic location of first intermediate routing device and assigning a second confidence level to the determined geographic location of the second intermediate routing device, and wherein selecting a route comprises selecting a route from one of the first route or the second route using the geographic location of the destination, the geographic location of the router, the geographic location of the first intermediate routing device, the first confidence level assigned to the determined geographic location of the first intermediate routing device, the geographic location of the second intermediate routing device, and the second confidence level assigned to the determined geographic location of the second intermediate routing device.

Claims 80-88 are also allowable for at least the reason that each depends from an allowable independent claim.

CONCLUSION

In view of the Remarks, each of the presently pending claims in the Application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to pass the Application to issue. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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